

# FINAL CONDITIONS

## Pre-Construction Peak Flow

Runoff Curve Number and Runoff  
Thu Jun 27 16:04:16 2019  
Project: WV Poultry Partners  
Location: Present  
By: Checked: Date: 06/27/19

1. Runoff Curve Number (CN)	CN	Soil Group	Area(Acre)
Woods (Good)	70	C	82.270
Gravel Streets, Pads and Buildings	89	C	0.000
Pasture Grassland Range (Fair)	79	C	85.090
Row Crops - C (Good)	82	C	51.680

CN (weighted): 76.3  
Total Area: 219.000 Acres

2. Runoff  
Return Period: 1 YEAR  
Rainfall, P: 2.48 in  
Runoff, Q: 0.6971 in  
Runoff Volume: 12.7221 Acre-Ft

Time of Concentration (SCS) Thu Jun 27 16:06:39 2019

Project: WV Poultry Partners  
Location: Present  
By: Checked: Date: 06/27/19

Curve Number : 76  
Length of Flow : 4865.00 ft  
Average Land Slope : 1.54 %

Time of Concentration : 1.707 hrs. 102.4 mins

Graphical Peak Discharge Thu Jun 27 16:49:15 2019

Project: WV Poultry Partners  
Location: Developed  
By: Checked: Date: 06/27/19

1. Data:  
Drainage area:.....A = 219.0000Acres  
Runoff Curve Number:.....CN = 76

Time of Concentration:.....Tc = 102.40 min  
Storm Type:.....= II

Pond and swamp areas spread throughout watershed:.....= 2.83 percent of A  
6.1977 Acres

2. Frequency:.....yr = 1

3. Rainfall, P(24-hour):.....in = 2.48

4. Initial abstraction, Ia:.....= 0.6316

5. Compute Ia/P:.....= 0.2547

6. Unit peak discharge, qu:.....csm/in = 222.630

7. Runoff, Q:.....in = 0.6825

8. Pond & swap adjustment factor:.....Fp = 0.75

9. Peak Discharge, qp:.....cfs = 38.994

The increase in Runoff from the new Impervious areas is 110,991 CF.  
Total Basin Retention of 72 hours is 445,880 CF.  
Therefore, overall Peak Discharge for the 1-yr event is significantly decreased (to 22.043 cfs) as result of the Sediment Basin/SWM Controls.

## Pre-Post Calculations

## Post-Construction Peak Flow

Runoff Curve Number and Runoff  
Thu Jun 27 17:40:48 2019  
Project: WV Poultry Partners  
Location: Developed - Less Detained Drainage Area  
By: Checked: Date: 06/27/19

1. Runoff Curve Number (CN)	CN	Soil Group	Area(Acre)
Woods (Good)	70	C	61.370
Gravel Streets, Pads and Buildings	89	C	0.000
Pasture Grassland Range (Fair)	79	C	15.440
Row Crops - C (Good)	82	C	46.990

CN (weighted): 75.7  
Total Area: 123.800 Acres

2. Runoff  
Return Period: 1 YEAR  
Rainfall, P: 2.48 in  
Runoff, Q: 0.6692 in  
Runoff Volume: 8.8937 Acre-Ft

Time of Concentration (SCS) Thu Jun 27 16:06:39 2019

Project: WV Poultry Partners  
Location: Developed  
By: Checked: Date: 06/27/19

Curve Number : 76  
Length of Flow : 4865.00 ft  
Average Land Slope : 1.54 %

Time of Concentration : 1.707 hrs. 102.4 mins

Graphical Peak Discharge Thu Jun 27 17:42:10 2019

Project: WV Poultry Partners  
Location: Developed  
By: Checked: Date: 06/27/19

1. Data:  
Drainage area:.....A = 123.8000Acres  
Runoff Curve Number:.....CN = 76

Time of Concentration:.....Tc = 102.40 min  
Storm Type:.....= II

Pond and swamp areas spread throughout watershed:.....= 2.83 percent of A  
3.5035 Acres

2. Frequency:.....yr = 1

3. Rainfall, P(24-hour):.....in = 2.48

4. Initial abstraction, Ia:.....= 0.6316

5. Compute Ia/P:.....= 0.2547

6. Unit peak discharge, qu:.....csm/in = 222.630

7. Runoff, Q:.....in = 0.6825

8. Pond & swap adjustment factor:.....Fp = 0.75

9. Peak Discharge, qp:.....cfs = 22.043

## Legend

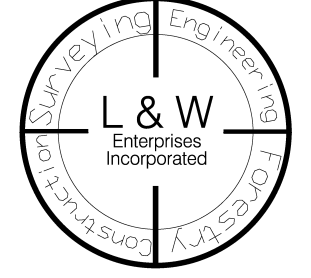
- 1390 Existing 5' Contour
- Existing Tree Line
- Existing Utility Line / Pole
- Surface Owner Property Line
- LOD Limits of Disturbance
- Proposed Diversion Ditch
- Proposed 1' Contour
- Proposed 5' Contour
- SF Proposed Super Silt Fence
- Proposed Rock Check Dam
- Proposed Culvert W/ Inlet & Outlet Protection
- Proposed Straw Wattles
- Proposed Silt Soxx w/ Diameter
- Proposed 1' Road Contour
- Proposed 5' Road Contour
- Proposed Rip-Rap
- \* Silt Soxx Diameter in Inches
- \* 18" Silt Soxx Can be Substituted for Super Silt Fence in non-concentrated flow areas.

REVISIONS

DATE



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THIS DOCUMENT  
PREPARED FOR  
WV POULTRY  
PARTNERS 1, LLC.

FINAL CONDITIONS  
WV POULTRY PARTNERS 1, LLC.  
- POULTRY OPERATION  
- PASTURE & SEDIMENT CONTROL PLAN  
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN  
MOOREFIELD DISTRICT  
HARDY COUNTY, WV

Date: 6/11/19

Scale: 1" = 300'

Designed By: CKW

File No. WVPP1 4-19

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